2612

#5
BA 6/9/04

Digital Electronic Cinema, Inc.
Digital Cinema Systems Corp.
141A South Peck Drive
Beverly Hills, CA 90212

May 24, 2004

In reply to: mail dated 4/22/04 re: Application no. 09/733.562 confirmation no. 2380

REGISTERED MAIL

Tuan V Ho
U.S. Department of Commerce
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Tuan V Ho:

Please find the enclosed response to the office communication mailing date 4/22/04 regarding claims for patent application no. 09/733.562, attorney docket no. 18726-13, confirmation no. 2380 from Dr. Don Mead. Please note that the company's address has changed, see above, and Don Mead's address has changed to: Don Mead, 6575 H Paseo Del Norte, Carlsbad, CA 92009.

Respectfully,

Cindy S. Fisher
President

Enclosure (1)

cc: Don Mead

Claims-

What is claimed:

1. An apparatus for converting 16mm, 35mm, and 70mm motion picture and TV film images from an analog format to a digital format comprising

   A photodetector system

   A film holder alignment system with said photodetector

   Said photodetector system including at least one light activated array for black and white images

   Said at least one array including at least four subsections wherein each subsection is assigned at least one independent set of shift registers; and,

   A digital memory recording read/write system interconnected with an output from each subsection whether a single black and white array or three arrays for color.

2. An apparatus as set forth in claim one, wherein said photodetector includes at least three separate arrays, each separated arrays corresponding to the primary colors found in the human visual system

3. A composite array wherein each subsection contains a separate horizontal and vertical shift register.

4. An apparatus as set forth in claim 1, wherein said array has at least one to four subsections each having a separate horizontal and vertical shift registers

5. An apparatus as set forth in claim 1, wherein said two read/write memory systems

6. An apparatus as set forth in claim 5, includes a controller that alternates the read and write output and input from memory in a linear fashion where the controller reads line one while line two is being written.

7. An optical system that corrects 16mm, 35,mm and 70 mm film to be of an exact and consistent image as it is displayed on to the photodetector.

8. A method for converting a film image to digital format comprising:
   Providing a film holder
   Aligning said film holder with a photodetector system
   Projecting images as claimed in number 7 to at least one to four subsections of a light activated array of said photodetector system and; and,
   Creating independent data streams related to said film image for each of said at least four subsections of the said array

9. A method as set forth in claim two, wherein images from said film are projected to at least four subsections of each of three activated arrays, each of said three light activated arrays corresponding to a primary color.

10. A method as set forth in claim 9, wherein said film images are projected to at least four or more of said light activated array.

11. Methods as set forth in claim 6 including recording said data streams in two independent read/write storage memories.

12. A method as set forth in claim 6, including alternating the recordation of said data streams between said at least two independent in and out storage media.

13. A method as set forth in claim 6, including directing said data streams stored in said independent storage media in an alternating manner to a common storage device such as a mass storage RAID system, optical holographic tape or optical holographic disk.

H

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,562	12/08/2000	Donald C. Mead	18726-13	2380

7590 04/22/2004

Dr. Donald C. Mead
4140 Adams St.
Carlsbad, CA 92008

EXAMINER	
HO, TUAN V	

ART UNIT	PAPER NUMBER
2612	4

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/733,562	MEAD, DONALD C.	
	Examiner	Art Unit	
	TUAN HO	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wordsworth et al (US 5,818,518) in view of Morimoto (US 5,969,759).

With regard to claim 1, Wordsworth et al discloses in Figs. 1 and 8, a film transfer apparatus that comprises the digital format (digital image data is stored in digital frame store memory 7, col. 4, line 59), photodetector system (photodetectors 5, col. 4, line 55), film holder (film transport 2 inherently includes a film holder so as to hold the film and align the film

with the detector 5), one light activated array (detectors 5 is a CCD array including at least on array that is activated by light rays, col. 6, line 26); except that the array including at least two subsections wherein each subsection is assigned at least one independent shift register and a digital recording medium interconnected with an output from each subsection.

Wordsworth et al does not explicitly disclose any array including at least two subsections and digital recording medium interconnected with an output from each section. However, Morimoto teaches using a CCD image sensing device that comprises four partial image sensing areas 101a-101d, col. 7, lines 15-16; where the output of each partial area is connected to a field memory 131, where the memory includes three different storage areas 131a-131d controlled by control computer 132, col. 7, line 27 and line 44 as shown in Fig. 5. The use of multiple outputs image sensor can reduce consumed power without impair the transfer efficiency, col. 3, lines 24-26. Noted that each of the partial area 101 comprises an independent horizontal register 102 and vertical registers associated with the horizontal register, col. 7, lines 11-13.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the detector 5 and frame store 7 of Wordsworth et al with the

array sensor and filed memory 131 of Morimoto so as to obtain an array including at least two subsections wherein each subsection is assigned at least one independent shift register and a digital recording medium interconnected with an output from each subsection. That is because the replacement of array and memory of Morimoto with the detector and frame memory of Wordsworth et al would reduce consumed power without impair the transfer efficiency.

With regard to claim 2, Wordsworth et al in view of Morimoto does not explicitly disclose any three separate image color arrays such as R, G or B. Official Notice is taken for a color image sensors system comprises three separate primary color arrays. Noted that use of the three separate color arrays in a color video camera provides better quality image color and high resolution since each pixel representing the object is multiplied three times.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the image sensor system of Wordsworth et al in view Morimoto with three separate primary image color arrays so as to obtain a film converting apparatus using three image color sensors because the substitution would provide better image quality and resolution.

With regard to claims 3, 4, 5, 6 and 7, claims 3-7 recites what was discussed with respect to claim 1.

With regard to claim 8, Claim 8 recites what was discussed with respect to claim 1. Noted that Morimoto discloses memory 131 includes memory 131a-131d that independently stores image data of each partial area 101.

With regard to claim 9, Wordsworth et al in view of Morimoto discloses a parallel outputs connected to the memory and does not disclose any controller alternating the delivery of output from the array amongst each of the two recording media. However, Official notice is taken for a controller alternating delivery of output from an array amongst each of the memory by using a multiplexer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control controller of Wordsworth et al in view of Morimoto so as to obtain a controller alternating delivery of output from an array amongst each of the memory by using a multiplexer. This is because the modification of the Wordsworth and Morimoto system would provide allow the film converting system select a particular image filed to store and thereby to improve the efficiency of the system.

With regard to claim 10, Wordsworth et al in view of Morimoto does not disclose any common storage device. However, Official Notice is taken for a memory that is used to store processed image data so as to playback or archive for future a use.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a memory that is used to store the processed composite images so as to playback or archive.

With regard to claim 11, Wordsworth et al in view of Morimoto does not disclose any timing mechanism generating a timing signal corresponding to a frame size of the film.

Official Notice is taken for a timing device that is used to generate a timing signal in accordance with a frame size of a film.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the control computer 132 of Wordsworth et al in view of Morimoto so as to generate a timing signal corresponding to a frame size of the film since the correct timing signal corresponding to a frame size would provide a correct image size without any over or under scanning process.

With regard to claim 12-20, method claims 12-20 correspond to apparatus claims 1, 3, 4, 2, 5, 8, 9 and 10 and are analyzed the same with respect to apparatus claims 1, 3, 4, 2, 5, 8, 9 and 10.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brette discloses a telecine system that generates a high definition image signal.

Swinson et al discloses a high resolution film scanner including a CCD image sensor.

Orava et al discloses an image sensor that includes a a plurality of sub-arrays.

Itoh et al discloses two-dimensional image readout sensor device that can read out image signals from a sub-area.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (703) 305-4943. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WENDY GARBER, can be reached on (703) 305-4924. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

TUAN HO

Primary Examiner

Art Unit 2612

Notice of References Cited	Application/Control No. 09/733,562	Applicant(s)/Patent Under Reexamination MEAD, DONALD C.	
	Examiner TUAN HO	Art Unit 2612	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,818,518	10-1998	Wordsworth et al.	348/106
	B	US-5,969,759	10-1999	Morimoto, Michihiro	348/311
	C	US-6,118,478	09-2000	Brett, Stephen	348/97
	D	US-5,644,356	07-1997	Swinson et al.	348/96
	E	US-5,812,191	09-1998	Orava et al.	348/308
	F	US-4,597,012	06-1986	Itoh et al.	348/308
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.